

Space travel

To discuss ...

- Why would we want to travel to another star..?
 - Find other planets.
 - Find other life.
- Why would it be difficult to travel to another star..?
 - Too far. Takes thousands of years to get there.
- Would robot spaceships make it easier..? How..?
 - Don't need any air, food or water.
 - Can send back pictures.
- If you had a spaceship that goes 50,000 miles an hour (faster than any spaceship ever built), how long do you think it would take you to get to the nearest star..?
 - It would take about 50,000 years to get there, and 50,000 years to get back, or about 100,000 years for a round trip.
 - How long is 100,000 years..? If you could go back 100,000 years, there would be no people like us on Earth. (Just cavemen.)
- Do you think scientists will invent spaceships in the future than will take people to other stars and galaxies, like they do in Hollywood movies..?
 - No one knows. (A hundred years ago, who ever thought we would send people to the Moon..?)

To do ... (on blackboard if time permits)

- Try a "mind-bender." Figure out the distance to the nearest star (besides our Sun).
 - Nearest star (Alpha Proxima) is four light years away.
 - A light year is the distance light travels in a year.
 - The speed of light is 186,000 miles per second.
 - Using this information, how far does light travel in a one year..?

First, how many seconds in a year:

60 seconds per minute x 60 minutes per hour x 24 hours per day x 365 days per year = 31,536,000 seconds per year
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Then, how many miles in a light year:

31,536,000 seconds per year x 186,000 miles per second = 6,000,000,000,000 miles/light year (that's six <u>trillion</u> ..!)

Then four light years to the nearest star = 4 x 6 trillion miles = **24 trillion miles**

(No wonder it would take 50,000 years to get there,
even on a super-fast spaceship that goes 50,000 mph...)